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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/609,162 | 06/26/2003 | Kimihiko Sano | 03383/LH | 7848 |

1933 7590 05/31/2006

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| EXAMINER | |
|---|---|
| SIMONE, CATHERINE A | |
| **ART UNIT** | **PAPER NUMBER** |
| 1772 | |

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/609,162 | SANO ET AL. | |
| | Examiner | Art Unit | |
| | Catherine Simone | 1772 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *2,5,6,8,13-23 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,5,6,8,13-23 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Withdrawn Rejections*

1. The 35 U.S.C. 112 rejection of claims 2, 5, 6, 8 and 13-27 of record in the Office Action mailed 12/9/05, Pages 2-3, Paragraph #4 has been withdrawn due to the Applicants amendment filed 3/9/06.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2, 5, 6, 13-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okabe (JP 2-206140; refer to the translation copy).

Okabe discloses a protective film comprising a material main body (Fig. 3, element 1) which protects a material structure (Fig. 3, element 3), a plurality of projections which are arranged continuously at least at each of two opposite widthwise ends of the material main body, which are opposite ends of the material main body along a width direction thereof, and are formed by respective parts of the material main body to extend from a base portion of the material main body (Fig. 3, element 10a), wherein each of the projections comprise a crown portion having a surface that is a plane that is substantially parallel with a main surface of the protected material structure (Fig. 3, element 10a), and a side wall portion extending from the

crown portion (Fig. 3, element 10). However, Okabe fails to disclose the amount by which the projection provided at a first one of the opposite widthwise ends of the protective film being shifted with respect to a corresponding projection at a second one of the opposite widthwise ends is not smaller than ¼ pitch and not larger than ¾ pitch. The optimum range for the pitch would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the projections in Okabe to have the amount by which the projection provided at a first one of the opposite widthwise ends of the protective film is shifted with respect to a corresponding projection at a second one of the opposite widthwise ends being not smaller than ¼ pitch and not larger than ¾ pitch, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II).*

Regarding claim 5, the plurality of projections (Fig. 3, element 10a) project in at least two different directions from the base portion of the material main body. Regarding claim 6, the plurality of projections comprise first projections (Fig. 3, element 10a) projecting from one surface of the material main body, and second projections (Fig. 3, element 10a) projecting from another surface of the material main body, and the first and second projections are arranged alternately along a direction in which the projections are arranged (Fig. 3, element 10a). Regarding claim 13, note respective gap portions being formed between the plurality of projections (Fig. 3, elements 10), and the respective gap portions have at least two different widths measured along a direction of arrangement of the projections (Fig. 3, elements 10).

Regarding claim 14, the projections are substantially trapezoidal as viewed from an end surface side of the material main body (Fig. 1(b), element 10). Regarding claims 15 and 16, the projections are substantially u-shaped and semicircular as viewed from one surface side of the material main body (Fig. 2(b), element 20). Regarding claims 17-19, the protected material structure (Fig. 3) comprises interconnect patterns and electronic components such as semiconductor chips, and the opposite widthwise ends of the material main body are not superimposed on the interconnect patterns and electronic components (see page 2, paragraphs 2 and 3). Regarding claim 20, the material main body (Fig. 3, element 1) is long enough to protect the protected material structure (Fig. 3, element 3). Regarding claim 21, the protected material structure comprises sprocket holes (Fig. 1(c), element 3a), and the opposite widthwise ends of the material main body are in proximity to the sprocket holes (Fig. 1(c), element 10a). Regarding claim 22, the protected material structure comprises sprocket holes at opposite widthwise ends thereof (Fig. 1(c), element 3a). Regarding claim 23, the material main body has a sheet form (Fig. 3, element 1) so as to protect the protected material structure, which also has a sheet form (Fig. 3, element 3). Regarding claim 25, note projections (Fig. 1a, elements 10) which are arranged continuously at opposite lengthwise ends of the material main body, which are opposite ends of the material main body along a length direction thereof (Fig. 1a, element 1) and which are formed by respective parts of the material main body to extend from a base portion of the material main body; wherein each of the projections comprises a crown portion having a surface that is a plane that is substantially parallel with the main surface of the protected material structure (Fig. 3, elements 10a), and a side wall portion extending from the crown portion (Fig. 3, elements 10).

4. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okabe (JP 2-206140; refer to the translation copy) in view of Odaka (JP 2002-076064; refer to the translation copy).

Okabe discloses the protective film as detailed above except for conductive layers being provided on respective surfaces of the material main body. Odaka teaches that it is old and well-known in the art to provide conductive layers on respective surfaces of a material main body (Drawing 5, elements 28) for the purpose of preventing generation of electrostatic charge to the utmost, peeling of conductive films and generation of conductive foreign particles accompanied by peeling. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided conductive layers on respective surfaces of the material main body in Okabe as suggested by Odaka in order to prevent generation of electrostatic charge to the utmost, peeling of conductive films and generation of conductive foreign particles accompanied by peeling.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okabe (JP 2-206140; refer to translation copy).

Okabe discloses a protective film comprising a material main body (Fig. 3, element 1) which protects a material structure (Fig. 3, element 3), a plurality of projections which are arranged continuously at least at each of two opposite widthwise ends of the material main body, which are opposite ends of the material main body along a width direction thereof, and are formed by respective parts of the material main body to extend from a base portion of the material main body (Fig. 3, element 10a), wherein each of the projections comprises a crown portion having a surface that is a plane that is substantially parallel with a main surface of the

protected material structure (Fig. 3, element 10a), and a side wall portion extending from the crown portion (Fig. 3, element 10); wherein the plurality of projections (Fig. 3, elements 10) comprise first projections projecting from a first surface of the material main body, and second projections projecting from a second surface of the material main body, and the first and second projections are arranged alternately along a direction in which the projections are arranged (Fig. 3, elements 10); wherein the first and second projections are grouped into pairs of projections, and each of the pairs includes of one of the first projections and one of the second projections adjacent to the one of the first projections. However, Okabe fails to disclose the crown portions of the first projection and the second projection in a same pair having the same width along the direction in which the projections are arranged, be different from a width along the direction in which the projections are arranged of the crown portions of an adjacent pair of projections.

Normally, it is to be expected that a change in shape of the crown portions of the first and second projections in a same pair and in an adjacent pair of projections would be an unpatentable modification. Under some circumstances, however, changes such as shape may impart patentability to a product if the particular shape claimed produces a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. MPEP 2144.04 IV (B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the shape of the crown portions of the first and second projections in a same pair and the crown portions of the projections in an adjacent pair of the film in Okabe to where the widths of the crown portions of the projections in each pair is different from the other along the direction in which the projections are arranged. One skilled in

the art would have been motivated to do so in order to form a protective film, since it has been held that the change in form or shape of the crown portions of the projections would be an unpatentable modification in absence of showing unexpected results.

***Response to Arguments***

6. Applicant's arguments filed 3/9/06 have been fully considered but they are not persuasive.

Applicants argue "the optimization of a parameter can only be said to be obvious as a matter of routine experimentation if the variable is recognized as being a "result-effective variable." Accordingly, it is respectfully submitted that the Examiner must show that shifting the projections at the widthwise ends of the tape of Okabe was known to achieve a recognized result before the Examiner can assert that it would have been an obvious optimization to modify Okabe to achieve the claimed shifting range of not less than ¼ pitch and not more than ¾ pitch".

However, it is to be pointed out that Okabe clearly teaches a protective film comprising a material main body (Fig. 3, element 1) which protects a material structure (Fig. 3, element 3), a plurality of projections which are arranged continuously at least at each of two opposite widthwise ends of the material main body, which are opposite ends of the material main body along a width direction thereof, and are formed by respective parts of the material main body to extend from a base portion of the material main body (Fig. 3, element 10a), wherein each of the projections comprise a crown portion having a surface that is a plane that is substantially parallel with a main surface of the protected material structure (Fig. 3, element 10a), and a side wall portion extending from the crown portion (Fig. 3, element 10). Additionally, in Figure 3 of Okabe, it is clearly shown that the projection 10 provided at a first one of the opposite widthwise

ends of the protective film is shifted with respect to a corresponding projection 10 at a second one of the opposite widthwise ends. Therefore, the optimum range for the amount the projection is shifted with respect to the corresponding projection would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the projections in Okabe to where the amount by which the projection provided at a first one of the opposite widthwise ends of the protective film is shifted with respect to a corresponding projection at a second one of the opposite widthwise ends is not smaller than ¼ pitch and not larger than ¾ pitch, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II).*

Applicants then argue "if one were to arbitrarily change the shapes of the crown portions of the projections of Okabe, the mere reconfiguration of shape would not hit upon the advantageous features of the present invention as recited in claim 8, whereby the first and second projections are grouped into pairs of projections, and each of the pairs includes of one of the first projections and one of the second projections adjacent to the one of the first projections, and whereby for each of the pairs of projections, the crown portions of the first projection and the second projection in a same pair have a same width along the direction in which the projections are arranged, which is different from a width, along the direction in which the projections are arranged, of the crown portions of an adjacent pair of projections".

However, it is to be pointed out that Okabe clearly teaches a protective film comprising a material main body (Fig. 3, element 1) which protects a material structure (Fig. 3, element 3), a plurality of projections which are arranged continuously at least at each of two opposite widthwise ends of the material main body, which are opposite ends of the material main body along a width direction thereof, and are formed by respective parts of the material main body to extend from a base portion of the material main body (Fig. 3, element 10a), wherein each of the projections comprises a crown portion having a surface that is a plane that is substantially parallel with a main surface of the protected material structure (Fig. 3, element 10a), and a side wall portion extending from the crown portion (Fig. 3, element 10); wherein the plurality of projections (Fig. 3, elements 10) comprise first projections projecting from a first surface of the material main body, and second projections projecting from a second surface of the material main body, and the first and second projections are arranged alternately along a direction in which the projections are arranged (Fig. 3, elements 10); wherein the first and second projections are grouped into pairs of projections, and each of the pairs includes of one of the first projections and one of the second projections adjacent to the one of the first projections (Fig 3, element 10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the shape of the crown portions of the first and second projections in a same pair and the crown portions of the projections in an adjacent pair of the film in Okabe to where the widths of the crown portions of the projections in each pair is different from the other along the direction in which the projections are arranged. One skilled in the art would have been motivated to do so in order to form a protective film, since it has been held that the change in form or shape of the crown portions of the projections would be an

unpatentable modification in absence of showing unexpected results. Thus, the claims fail to patentably define over the prior art as applied above.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Catherine A. Simone
Examiner
Art Unit 1772
May 23, 2006

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

5/26/06